(Model.)

L. S. LEE.

HAIR CLIPPING MACHINE.

No. 331,508. Patented Dec. 1, 1885.

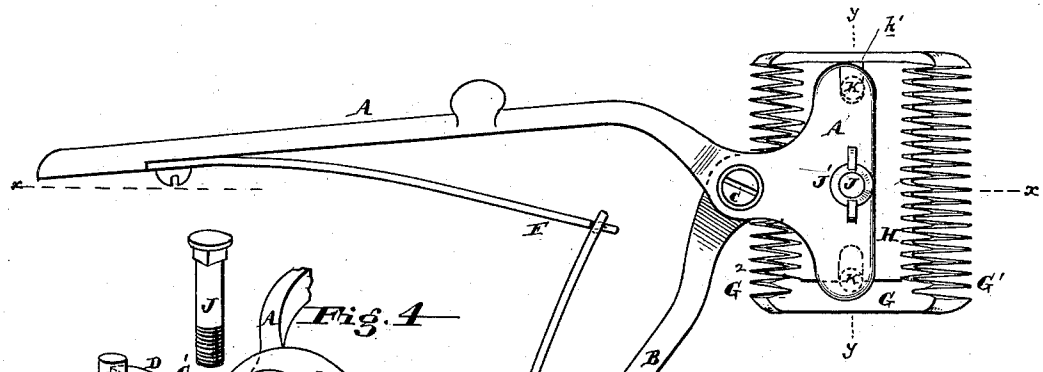


Fig. 4

Fig. 1

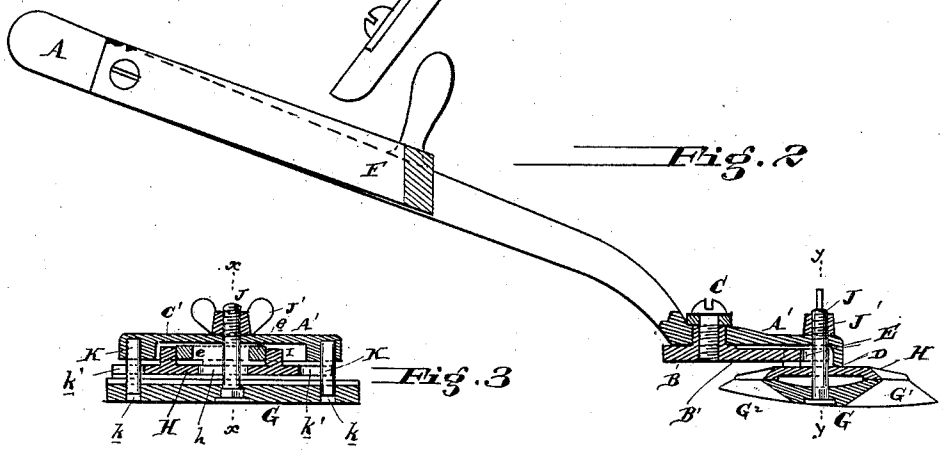


Fig. 2

Fig. 3

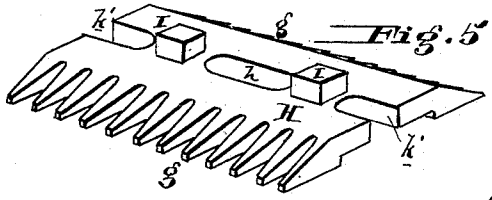


Fig. 5

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UNITED STATES PATENT OFFICE.

LEWIS S. LEE, OF PHILADELPHIA, PENNSYLVANIA.

HAIR-CLIPPING MACHINE.

SPECIFICATION forming part of Letters Patent No. 331,508, dated December 1, 1885.

Application filed June 11, 1884. Serial No. 134,518. (Model.)

To all whom it may concern:

Be it known that I, LEWIS S. LEE, of the city and county of Philadelphia, and State of Pennsylvania, have invented new and useful Improvements in Hair-Clipping Machines, of which the following is a specification.

My invention has reference to clipping-machines or shears adapted to cutting hair of men or animals, the only material difference between barbers' and horse clippers being in size; and it consists in forming the lower comb or cutting-plate double, it being provided with serrations on its two opposite edges and having the thickness of the said plate greater at one edge than at the other, whereby either edge may be set for cutting and the hair clipped long or short; further, in providing the movable cutting-comb with lugs arranged in line with the guide-pins and the line of movement of the cutter, and combined with an actuating-lever which has its end arranged to work between the lugs, the result of which is that the pivotal point of the operating-levers may be brought close up to the cutters and great leverage be obtained, with a compact construction of machine; and in many details of construction, all of which is fully set forth in the following specification, and shown in the accompanying drawings, which form part thereof.

In the drawings, Figure 1 is a plan view of my improved clipping-machine. Fig. 2 is a sectional elevation of same on line *x x*. Fig. 3 is a cross-section of same on line *y y*. Fig. 4 is a perspective view of the two ends of the operating-levers; and Fig. 5 is a perspective view of the movable cutting-comb.

A and B are the two operating-levers, adapted to be held in the hand, and are pivoted at C and pressed apart by springs F. The end of the supporting-lever A is spread out or flattened, as at A′, and made cup shape or recessed on its under surface, as indicated at C, and is provided with the lugs D D′, which receive the plate H and act as guiding-surfaces against which the upper surface of the movable cutting-comb H works. The lower or stationary comb, G, is made with double cutting-teeth—viz., G′ and G²—the former being much thicker than the latter, so as to insure the cutting-edges being at different distances from the lower or guiding surface of the comb, and is held to the supporting-lever A by a bolt, J, which passes through said plate and the end A′ of lever A, and is secured thereto by a thumb-nut, J′, or in any other suitable manner desired, and is prevented from turning by the studs K, extending down from lever end A′ and entering holes *k*.

H is the movable cutting-comb, and may be made of uniform thickness throughout, but is preferably somewhat recessed on its under side to allow the teeth to automatically wear down by working on the teeth of comb-plate G, and may have teeth or serrations *g* on both its edges to correspond with the teeth G′ and G² of said plate G; or, if desired, this plate H may have only a single set of serrations. Its center is slotted, as at *h*, through which the bolt J passes, and upon each end of this slot and on the top of the plate are the lugs I, against which the ends of the extensions or tongues *e* of the end B′ of lever B rest, which tongues are formed by slotting or notching the end B′, as shown at E, thereby allowing said end B′ of the lever to straddle the pin or bolt J and cause the tongues *e* to press against the lugs I on their inner surfaces, as shown in Fig. 3. This construction causes the power to be applied to the movable cutting-comb H in a line with its movement, thereby preventing any binding of the cutter or undue wear of its bearing-surfaces, and also allows the pivotal point C to be brought extremely close to the cutters without decreasing the leverage of the actuating-levers. The ends of the cutting-plate H are notched or slotted in line with the lugs I, as shown at *k*′, through which the studs K pass and act as guides for said plate.

It is advisable in practice to make the plate H double, because the teeth *g* thereof will become worn to suit the corresponding teeth, G′ or G², and in turning the plate G to vary the length of cut the plate H is turned also; but this reversibility of the cutter H is not essential to my invention, though it is most preferable.

Several plates G having various depths of cuts, may be used with the one pair of levers and cutter H; and it is evident that, so far as the construction of the levers A and B are concerned and the way in which the cutters are secured thereto and operated thereby, the said cutters might be made with single cutting-edges. By turning the nut J′ the cutter H may

be pressed more or less tightly against the plate G, thereby insuring positive cutting and enabling the operator to take up all wear and make the clipper automatically sharpen itself.

I am aware of the patents to Coates, No. 238,353, of 1881, and Phipps, No. 166,631, of 1875, and claim nothing therein set forth or claimed.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A cutting-plate for a clipping-machine having two sets of cutting-teeth, the depth of cut of one set being greater than the depth of cut of the other, substantially as and for the purpose specified.

2. A cutting-plate for a clipping-machine having two sets of cutting-teeth, the depth of cut of one set being greater than the depth of the other, in combination with a movable cutter arranged to slide upon said plate and levers to hold the plate and move the cutter, substantially as and for the purpose specified.

3. A lever, A, for a clipping-machine, having its end enlarged and recessed, as at C′, and provided with the bearing-straps D D D′ and pin K, the said recessed part being open in the direction of the handle, but practically closed toward the front or cutting side of the machine to prevent passage of hair, wool, or other material into the lever-connections, in combination with the lever B, hinged to lever A, and having its cutter-actuating end located wholly within the recessed part C′ and protected thereby, and the two cutting-plates, one of which is held by the lever A and the other of which is moved by the lever B, substantially as and for the purpose specified.

4. The cutter H, for a clipping-machine, provided with the teeth *g*, the two lugs I I, a slot, *h*, located between the said lugs, and the slots or notches *k k*, exterior to said lugs, substantially as shown.

5. In a clipping-machine, the combination of the two levers A B, hinged together, one of which has the notch E and tongues *e*, stationary cutting-plate G, and movable cutting-plate H, having lugs I I, which fit upon the outside of the tongues *e*, and a bolt, J, extending through the notch E and clamping both cutting-plates together, substantially as and for the purpose specified.

6. In a clipping-machine, the combination of levers A B, double-edged plate G, having cutting-teeth of different thickness, and cutting-plate H, having lugs I, substantially as and for the purpose specified.

7. In a clipping-machine, the combination of lever A, lever B, having notch or slot E and tongues *e*, plate G, bolt J, plate H, having slot *h* and lugs I, and springs F, substantially as and for the purpose specified.

In testimony of which invention I hereunto set my hand.

LEWIS S. LEE.

Witnesses:
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WILLIAM C. MAYNE.